

U.S. Pat. Appl. No. 09/314,001  
Attorney Docket No.: 033611 R 002

IN THE CLAIMS:

Please add new claims 30 and 31 as presented on the attached CLEAN COPY OF THE NEW CLAIM.

REMARKS

Prior to examination on the merits, Applicant respectfully requests entry and consideration of this Preliminary Amendment. An Office Action has not been received in this Application in response to the Request for Continuing Prosecution, filed on October 8, 2001. Therefore, please accept this response as timely. The amendment to the specification is an obvious correction for an obvious grammatical error.

Newly added claims 30 and 31 are supported throughout the specification and by the original claims (see for example the third paragraph of page 1) and the example tables. Claims 30 and 31 further emphasizes the advantageous feature of the method of the present invention in facilitating the obtainment of basaltic fiber from rocks of varied composition basalt deposits.

The amendment made to the specification is to remove the redundant phrase "of the height."

It is noted that a verification statement for the earlier noted corrected translation of the parent PCF (incorporated by reference) document was not enclosed in the last Response. Applicant is currently preparing such a document for forwarding it to the Examiner.

If any fees under 37 C.F.R. §§1.16 or 1.17 are due in this filing, please charge the fees to Deposit Account No. 02-4300; Order No. 033611.002.


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If an extension of time under 37 C.F.R. §1.136 is necessary and not included herewith, such an extension is requested. The extension fee should be charged to Deposit Account No. 02-4300; Order No. 033611.002.

Respectfully submitted,

SMITH, GAMBRELL & RUSSELL, LLP

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### CLEAN COPY OF THE NEW CLAIM

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30. (New) A method according to claim 1, wherein the introduced basalt is derived from multiple main types of basalt rock compositions selected from the group consisting of a first main type basalt rock composition enriched with oxides of iron and titanium; a second main type basalt rock composition enriched with oxides of aluminum and silicon; and a third main type basalt rock composition enriched with oxides of magnesium, calcium and iron.

31. (New) A method according to claim 27, wherein the introduced basalt is derived from multiple main types of basalt rock compositions selected from the group consisting of a first main type basalt rock composition enriched with oxides of iron and titanium; a second main type basalt rock composition enriched with oxides of aluminum and silicon; and a third main type basalt rock composition enriched with oxides of magnesium, calcium and iron.

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# MARKED-UP VERSION OF THE AMENDMENTS TO THE SPECIFICATION

Page 4, first full paragraph bridging pages 4 and 5:

The technical result is obtained in a device for producing basaltic fibers, which includes a basalt weigher, a melting furnace, a feeder with discharging devices, feeding units, spinnerets, mechanisms for applying oil, and mechanisms for reeling the fibers up onto bobbins. According to the invention, a heat exchanger connects the basalt weigher with a firing space of the melting furnace, and the melting furnace has a stabilizing section for stabilizing the melted glass mass. The stabilizing section is connected with the feeder. The best technical result is attained when the height of the stabilizing section 0.4 - 0.6 [of the height] of the height of the basin of the furnace. A heat exchanger preliminary heats the basalt before it is charged into the furnace. The glass mass is stabilized to obtain glass mass composition with the relation of basic constituents

$$\frac{\text{Al}_2\text{O}_3 + \text{SiO}_2}{\text{CaO} + \text{MgO}} \geq 3$$

$$\text{CaO} + \text{MgO}$$

$$\frac{\text{FeO}}{\text{Fe}_2\text{O}_3} \geq 0.5$$

$$\text{Fe}_2\text{O}_3$$

$$\frac{2\text{Al}_2\text{O}_3 + \text{SiO}_2}{2\text{Fe}_2\text{O}_3 + \text{FeO} + \text{CaO} + \text{MgO} + \text{K}_2\text{O} + \text{Na}_2\text{O}} > 0.5,$$

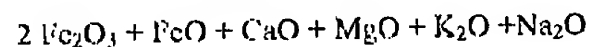
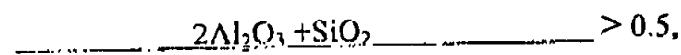
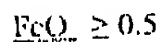
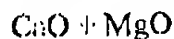
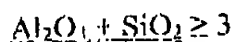
making it possible to remove crystal water, gas bubbles and foam, to stabilize the volume of the glass mass to obtain an even and smooth surface, and to ensure the stability of the temperature range and viscosity which is essential for fiber manufacture. The presence of a heat exchanger in the weigher on simultaneous charging ensures uniform heating throughout the volume of basalt by the reduction of hot air flowing from the firing space of the melting furnace, enabling the utilization of waste gases and the reduction of fuel consumption. The stabilizing section which has a height of 0.4 - 0.6 of the height of the basin of the furnace contributes to stabilizing the melt in volume at the

furnace exit with a specified temperature. The stabilizing section height is determined by the melt height as the temperature decreases, and the possible exit of gases and foam.

# CLEAN COPY OF THE AMENDMENTS TO THE SPECIFICATION

Page 4, first full paragraph bridging pages 4 and 5:

The technical result is obtained in a device for producing basaltic fibers, which includes a basalt weigher, a melting furnace, a feeder with discharging devices, feeding units, spinnerets, mechanisms for applying oil, and mechanisms for reeling the fibers up onto bobbins. According to the invention, a heat exchanger connects the basalt weigher with a firing space of the melting furnace, and the melting furnace has a stabilizing section for stabilizing the melted glass mass. The stabilizing section is connected with the feeder. The best technical result is attained when the height of the stabilizing section 0.4 - 0.6 of the height of the basin of the furnace. A heat exchanger preliminary heats the basalt before it is charged into the furnace. The glass mass is stabilized to obtain glass mass composition with the relation of basic constituents



making it possible to remove crystal water, gas bubbles and foam, to stabilize the volume of the glass mass to obtain an even and smooth surface, and to ensure the stability of the temperature range and viscosity which is essential for fiber manufacture. The presence of a heat exchanger in the weigher on simultaneous charging ensures uniform heating throughout the volume of basalt by the reduction of hot air flowing from the firing space of the melting furnace, enabling the utilization of waste gases and the reduction of fuel consumption. The stabilizing section which has a height of 0.4

162 -- 0.6 of the height of the basin of the furnace contributes to stabilizing the melt in volume at the furnace exit with a specified temperature. The stabilizing section height is determined by the melt height as the temperature decreases, and the possible exit of gases and foam.

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